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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,451	01/23/2004	Hidenori Hasegawa	2004-0096A	5478

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EXAMINER

TOLEDO, FERNANDO L

ART UNIT	PAPER NUMBER
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2823

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/762,451

Applicant(s)

HASEGAWA, HIDENORI

Examiner

Fernando L. Toledo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20060203.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 8 – 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Minamio et al. (US Patent Application Publication US 2003/0015775 A1).

3. In re claims 8, 11 and 14, Minamio, in the US Patent Application Publication US 2003/0015775 A1; figures 1A – 10D discloses arranging several of linear leadframes (1 and 4) side by side separately from each other (Figure 1B); mounting several semiconductor chips 3 having a first main surface with several of electrode pads on a second main surface facing the main surface, each of the semiconductor chips placed over the several of the linear leadframes and separated from each other in a direction extending the linear leadframes with the second main surface of the semiconductor chip thereon (Figure 6B); joining several of the electrode pads to the several of the linear leadframes with bonding wires 5 (Figure 6C); forming the encapsulation part 6 for encapsulating the semiconductor chip and the bonding wire and an interframe encapsulation part for burying a space between the adjacent linear leadframes exposed outside the encapsulation part (Figure 6D); forming a groove part for cutting all the linear leadframes places under the second main surface in a vertical direction to the direction extending

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the linear leadframes (Figures 6A – 7); and cutting the leadframes and the interframe encapsulation parts exposed between the several of the semiconductor chips to separate into a semiconductor device having the semiconductor chip, a first external terminal row and second external terminal row facing each other as sandwich the groove part (Figure 7).

4. In re claims 9 and 12 Minamio discloses wherein the mounting is conducted by exposing outermost leadframes on both sides among the several of the linear leadframes arranged side by side, and the joining does not join the bonding wires to the outermost leadframes (Figure 6B).

5. In re claims 10, 13 and 17, Minamio, discloses wherein the mounting comprises mounting the semiconductor chips directly on the leadframes so that the second main surface of each of the semiconductor chips is directly attached to the leadframes via adhesive (§ 0085).

6. In re claim 15, Minamio discloses wherein the encapsulation part and the frame encapsulation part are formed in one piece (Figure 6D).

7. In re claim 17, Minamio discloses wherein the several of the first external terminals are separated in stripes (Figure 1B).

Response to Arguments

8. Applicant's arguments filed 23 December 2005 have been fully considered but they are not persuasive for the following reasons.

9. Applicant contests that the die pad of Minamio is not a lead frame and that there are no electrode pads. Examiner respectfully submits that the die pad 1 of Minamio is part of the lead frame as evidenced in paragraph 0082 of Minamio, which states in part that that the lead frame

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unit 11 has outer lead frames 9 and 10 and die pad 1. Minamio also teaches in paragraph 0086.

Hence the 35 USC 102(e) rejection stands and it is considered proper.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fernando L. Toledo whose telephone number is 571-272-1867. The examiner can normally be reached on Mon-Thu 7am to 5:30pm.

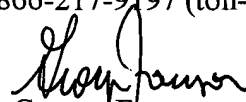
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


F Toledo

13 March 2006


George Fourson
Primary Examiner
Art Unit 2823